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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,179	09/26/2003	Christopher Cave	I-2-0414.1US	9858

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EXAMINER	
MEHRA, INDER P	
ART UNIT	**PAPER NUMBER**
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,179	CAVE ET AL.	
	Examiner	Art Unit	
	Inder P. Mehra	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *02 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-13 and 17-20* is/are rejected.

7)☒ Claim(s) *4-6 and 14-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/2/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application dated: 4/2/07. Based on this application, claims 1-20 are pending. Claims 2, 3, 5, 7, 9, 11, 12, 13, 17 and 19 have been amended.

Information Disclosure Statement

2. The information disclosure statement (IDS) including submitted on 4/2/07 was filed. The submission includes, "3G TS 25.211.3'd Generation Partnership Project; Technical Specification Group Radio Access Network; Physical Channels and Mapping of Transport Channels Onto Physical Channels (FDD) (Release 1999), V3.2.0, March 2000" is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Admitted Prior Art (Background of Instant application), hereinafter, APA** in view of **Toskala et al** (US PG Pub. No. 2006/0203753), Toskala.

For claims 1 and 11, APA discloses, "a wireless communication system having a Node B and a plurality of wireless transmit/receive units (WTRUs)", (**APA discloses, "Many current**

communication systems have uplink common channels (i.e.,channels which handle communications transmitted from a WTRU to the Node B) which are accessible by all WTRUs. These channels are used to establish and maintain a wireless connection between the WTRU and the Node B for transmitting both control information and data, refer to page 2 of specification, paragraph 0009) , the system comprising:

- a contention-based uplink (UL) channel for supporting UL transmissions from the WTRUs to the Node B; said UL channel being randomly accessed by a WTRU when the WTRU is ready to transmit data (**APA discloses, "The random access channel (RACH) ofa 3G system in the TDD mode is such a channel. The RACH is defined as an uplink contention-based common transport channel. When two or more WTRUs attempt to transmit their respective information over the RACH channel at the same time, a contention may occur. To alleviate the contention problem, each WTRU waits a different random amount of time before retransmitting its message to the Node B, refer to page 2 and paragraph 0009 of specifications);** and

APA does not disclose explicitly the following limitations, which are disclosed by Toskala, as follows:

- at least one downlink (DL) physical channel for supporting DL transmissions from the Node B to the WTRUs said DL transmissions including an acquisition indicator and information regarding said acquisition indicator; whereby said acquisition indicator confirms whether the data transmitted

over said UL channel was successfully received by the Node B, **(Toskala discloses, "Upon receiving acknowledgement from the base station BTS on the corresponding downlink acquisition indication channel (AICH), the UE sends a collision detection preamble which is used to differentiate between simultaneous access attempts by different user equipment that may have been in the access procedure simultaneously on the same physical channel", refer to paragraph 0014, 0008, and 0049). Further, Toskala discloses, "another attempted solution to the uplink access problem has been to use versatile channel assignment (VCAM), where the channel is assigned, after access preambles are exchanged, by way of an acquisition indication channel (AICH)", refer to paragraphs 0008 and 0049. Toskala, further, discloses The UE 102 observes, after each access preamble, whether the proper acknowledgement (same as acquisition indicator) arrives in the corresponding acquisition indication channel (AICH) via an acknowledgment signal (same as acquisition indicator) on a line 340 (same as acquisition indicator), which is used by the network to indicate that an access preamble has been received", refer to paragraph 0031.**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "at least one downlink (DL) physical channel for supporting DL transmissions from the Node B to the WTRUs said DL transmissions including an acquisition indicator and information regarding said acquisition indicator; whereby said acquisition indicator confirms whether the data transmitted over said UL channel was

successfully received by the Node B", as taught by Toskala. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

5. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of **Muramoto et al** (US P.G.Pub. No. 2005/0180377), hereinafter, '377.

For claims 2 and 12, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by '377 as follows:

- wherein said information regarding said acquisition indicator includes the timeslot occupied by said acquisition indicator(**Refer to '377's paragraphs 0076, 0078 and 0089, and fig. 6**).

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "wherein said information regarding said acquisition indicator includes the timeslot occupied by said acquisition indicator", as taught by '377. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of **Dahlman et al** (US P.G.Pub. No. 20040008658), hereinafter, 'Dahlman.

For claims 3 and 13, APA in view of Toskala discloses all the limitations of subject

matter with the exception of the following limitations which are disclosed by Dahlman, as follows:

wherein said information regarding said acquisition indicator includes the code used to transmit said acquisition indicator, (Dahlman discloses, "the base station can transmit acquisition indicator signals as different orthogonal code words for different signatures", Refer to paragraph 0039).

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "wherein said information regarding said acquisition indicator includes the code used to transmit said acquisition indicator", as taught by Dahlman. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

7. Claims 7, 9, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of **Miller et al** (US Patent. No. 5,956,644), hereinafter, Miller.

For claims 7, 9, 17 and 19, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by Miller., as follows:

* wherein said information regarding said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system, (Miller discloses, "this information can include data about the number of broadcast channels being received and monitored, the number of acquisition channels being used, refer to col.8 lines 50-55). .

It would have been obvious to the person of ordinary skill in the art at the time the

invention to use the capability of "wherein said information regarding said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system", as taught by Miller The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

8. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of **Sun et al** (US Patent. No. 6965633), hereinafter, Sun.

For claims 8 and 18, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by Sun., as follows:

- wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system., (**Sun discloses, "dedicated physical channel (DPCH), common control physical channel (CCPCH), dedicated shared channel (DSCH) and acquisition indicator channel (AICH), etc. as down link physical channel", refer to col. 1 lines 33-36**).

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system", as taught by Sun The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

9. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of Han **et al** (US Patent. No. 20040047333), hereinafter, Sun.

For claims 10 and 20, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by Han., as follows:

- wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system., **(Han discloses, "The transport channels are herein a coded composite transport channel (CCTrCH), a paging indicator channel (PICH), and an acquisition indicator channel (AICH), refer to paragraph 0047).**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system., as taught by Sun The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

Allowable Subject Matter

10. Claims 4-6 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues, "The Office relies on Toskala to remedy this deficiency. Toskala, however, does not remedy this deficiency at least because it does not teach or suggest "Information regarding said acquisition indicator." The present application is directed toward providing fast feedback for notifying WTRUs of the success or failure of a transmission. See specification, paragraphs [0014] and [0015]. By contrast, the invention of Toskala is not concerned with the speed of such feedback. Indeed, Toskala explicitly includes a delay in the method shown as 502 in Fig. 5 and disclosed in paragraph [0049].

In response, examiner states that limitation" fast feedback for notifying WTRUs of the success or failure of a transmission" is not claimed, as such, by applicant. However, **Toskala, discloses "When initiating transmission in a CDMA system, a big concern is how to ensure that the access takes place fast without a lot of signaling via RACH**". Examiner, further, states that **"3GTS25.211, technical specifications disclose "fast acquisition indicator", see paragraph 5.2.2/2.1; further, discloses, "acquisition indicator", see paragraph 5.3.3.3.6. Therefore, these terms are well known as standards**.

Applicant argues, "In the invention of Toskala there is no teaching or suggestion of "information regarding said acquisition indicator"; there is only disclosure of "acknowledgement". See for example Toskala paragraphs [0042] and [0049].

In response, examiner states that Toskala discloses explicitly, **Toskala, further, discloses The UE 102 observes, after each access preamble, whether the proper acknowledgement (same as acquisition indicator) arrives in the corresponding acquisition indication channel (AICH) via an acknowledgment signal (same as acquisition indicator)**

on a line 340 (same as acquisition indicator), which is used by the network to indicate that an access preamble has been received", refer to paragraph 0031.

In light of above explanation, arguments by applicant are not persuasive.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Inder Pal Mehra 6/12/07

Inder P Mehra
Examiner
Art Unit 2617

JOSEPH FEILD
SUPERVISORY PATENT EXAM